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[CHIP PACKAGE STRUCTURE]

Abstract

A chip package structure is disclosed. The chip package structure essentially comprises a carrier, one or more chips, a heat sink and an encapsulating material layer. At least one of the chips is flip-chip bonded and electrically connected to the carrier or another chip. There is a flip-chip bonding gap between the chip and the carrier or other chips. A heat sink is positioned on the uppermost chip. The encapsulating material layer fills the flip-chip bonding gap as well as a gap between the uppermost chip and the heat sink. A part of the surface of the heat sink away from the uppermost chip is exposed. Furthermore, the encapsulating material layer is formed in a simultaneous molding process. For example, the chip is separated from the heat sink by a distance between 0.03 ~ 0.2 mm, and the encapsulating material has a thermal conductivity greater than 1.2W/m.K.